Making Digital Transformation Real

Sven Packmohr
Malmö University
sven.packmohr@mau.se

Elaine Mosconi
Université de Sherbrooke
elaine.mosconi@usherbrooke.ca

Luis Antonio de Santa-Eulalia
Université de Sherbrooke
l.santa-eulalia@usherbrooke.ca

Abstract

For the second time, HICSS is hosting the minitrack Making Digital Transformation Real. After receiving 13 submissions from mainly authors at European research institutions, the focus is clearly on capability and case study research. To classify the seven selected submissions, a management perspective of preparing, doing, and evaluating fitted well. For the future, there is the need to develop a more mature theory foundation from the conducted case study research as well as to test and refine the theory development.

1. Introduction

Although modern digital technologies have been around for some time – the first internet-connection was set up 50 years ago – the time for the impact on society, businesses, and workplaces – the so-called digital transformation (DT) – is happening now. This digital evolution is disrupting society and all industry sectors. Societal side effects include changes in the nature of work and within education [1]. The technological development is a source of competitive advantages. New possibilities such as co-creation with the customer, context-sensitive systems as an application of AI, evolving business ecosystems, mass customization, and many more are developing. However, a lot of businesses struggle with the preparation, implementation, and evaluation of a digital transformation strategy and to become a data-driven company [2].

Reis, Amorim, Melão, and Matos [3] found a significant rise in publications on digital transformation after 2014. The same patterns are found in other literature reviews of the field [4]. It shows that digital transformation is a relatively new research topic. Therefore, we set up this mini-track to foster academic exchanges and investigate the explorative character of a still-emerging research topic. As a reaction to this call, 13 submissions in total were included in the minitrack. Out of these, eight take the approach of a case study. This is congruent with the findings from [3] as the mainstream in research on DT is on case studies during recent years.

2. Submissions

The received 13 submissions include 34 authors predominantly from European institutions (85%). Authors from North American institutions follow with 12% and 3% from Asia-Pacific. Except for one, all submissions adopt a qualitative research approach.

Regarding the methodological aspect, the focus is clearly on case studies. In some contributions, the empirical material is secondary data. Papers address issues directly or indirectly related to capabilities research. Capabilities are a concept of strategic management and connected to the Resource-based View of the firm. In particular, dynamic capabilities are seen as a tool to build, integrate, and reconfigure resources in volatile environments [5], such as provoked by digitalization. For an overall classification of the single contributions, we follow a management-driven process view of preparation, implementation, and evaluation of capabilities for digital transformations.

2.1. Preparing for Capabilities

The first theme concerns the preparation of capabilities for digital transformation. Osmundsen does this by investigating how firms can obtain the needed DT competences. The author defines DT competence as "a firm's bundle of its collective competences (skills, knowledge, expertise, experience, and other employee attributes) that are essential for a DT". Based on a longitudinal case study of the Norwegian Energy sector, Osmundsen conceptualizes developed and acquired skills on employee level, which lead to competences and DT capabilities on company level [6].

Schuch, Gerster, Hein, and Benlian focus on a multiple case study on non-digital born companies and their approaches towards scaled organizational agility. It is known that a trade-off exists between an ideal-

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theoretical and a company-specific usage of frameworks. The authors analyze the background of such trade-offs. They conclude that companies choose different implementation approaches, for instance top-down or bottom-up. The approaches depend on the need for more customer centricity or more release centricity. The authors see scaled-agile frameworks as an approach to, in the long-run, build up needed capabilities [7].

2.2. Working on Capabilities

Lundberg, Sandberg, and Nylén present a single longitudinal case study of a small Swedish construction company. They draw on the theory of dynamic capabilities to analyze the evolution towards becoming a digitally mature company by introducing a configuration tool for its customers. The introduction of this new technology leads to an innovation cycle that needs to be aligned with resources. The researchers develop a process model from their empirical model, showing the importance of scanning, designing, and evaluating as dynamic capabilities [8].

Also, SMEs are the focus of Pelletier and Raymond's work on orchestrating DT processes for a DT strategy, which in return requires specific capabilities. Within a case study of a Canadian industrial service SME, they focus on the elements which are impacted by the strategy and how it developed over time. By drawing on theories from Information Systems, such as strategy-as-practice and IT asset orchestration, the authors propose process model to describe and analyze the multimodality of a strategy process within the DT of an SME [9].

Ford and Mandviwalla take another perspective in their empirical material as they interviewed fifty participants involved in performing arts to conduct a study with a Grounded Theory approach to investigate what mechanisms drive digital innovation in this sector. From their empirical material, the authors found engagement as the central concept. Further, they develop six propositions focusing on different aspects of engagement. Also, capabilities played a role in building up more engagement. The authors draft the possibility of a capability maturity model based on engagement [10].

Gao, Hakanen, and Rajala examine how firms in asset-heavy industries are building up explorative and exploitative capabilities. Fostering this ambidexterity is important in disruptive times. The authors use a case study design with 28 companies. They see this as a single-case study because they consider the industry-specific conditions to be of importance. Network capabilities are a critical condition for ambidexterity as an inter-organizational perspective fosters the explorative side. Authors highlight the full potential of digital transformation is related to the combination of internal and external capabilities [11].

2.3. Evaluating Capabilities

Morakanyane, O'Reilly, and McAvoy advance a set of success factors of DT by using a content analysis approach. They use research articles and documented case studies as secondary empirical material. From their analysis, they derive a list of seven success factors and 23 sub-factors. Also, the authors show the importance of the factors by measuring their presence in the content. Skills and capabilities are part of the substantial success factor "Determine Digital Drivers" [12].

3. Conclusion

This minitrack aims to contribute to some theoretical evolution of this relevant research topic by exploring how organizations are making digital transformation real. What factors, competences and resources do organizations need to combine to undertake the challenges faced during DT? Papers selected by this minitrack allow us to discuss how organizations change due to DT and how they can successfully raise it.

Considering papers selected we see a substantial combination of capability research as the theoretical background. Known theoretical concepts are taken and further developed with a DT perspective. For the methodology side, case study approach has been widely chosen. The intense focus on inductive qualitative methods is an indication of the maturity of the research area. It seems DT is in an early stage and is still under-theorized. Case studies give a meaningful understanding of lessons-learned; they have some limitations because they represent an analysis of a system bound by time and place [13]. For the future, there is the need to turn these case studies into genuine theoretical models on digital transformation to include quantitative deductive research [14]. Eventually, mixed-method approaches are a methodological alternative due to the complexity of the field [15].

We are looking forward to exchanges and interaction among participants during the conference. Hopefully, this interaction will continue to take place within research collaborations to foster the evolution of this highly relevant research topic. We would also like to thank the numerous reviewers. Without their time and effort, this minitrack would not be possible.

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